Fact Sheet:

Land Inventory Monitoring and Assessment Team

June 1995

(LL-14)

The Problem

Military land managers need an ecological approach for managing natural resources on military training and testing lands in order to support the mission on a sustained basis. The goal must be provide military land managers and users with the best applications and tools possible to meet this requirement. The strategy should be based on ecological concepts and consist of characterization of the resources, analysis of the impacts on the resources, and resource management. Tradeoffs often exist between military training and conserving the natural environment, between one natural resource management goal and another, and between various ways to allocate scarce financial and personnel resources. This results in a complex and challenging task that must be continually improved and updated as conditions change.

The Team

The Land Inventory Monitoring and Assessment Team at the U.S. Army Construction Engineering Research Laboratories (CERL) develops innovative natural resource inventory, monitoring, analysis, mitigation, and management techniques for both Army-wide and case specific application. The team provides solutions to a broad range of land and natural resource management problems. Specific technical areas include: plant ecology, wildlife biology, soil science,

forestry, environmental regulations, database management, PC based systems, geographic information systems, remote sensing and statistical analysis. A multidisciplinary approach is required to develop applications that are robust enough to meet the requirement and also support National initiatives like maintaining biological diversity.

Benefits/Savings

The team's technologies help Department of Defense installations effect land and natural resource management programs that are ecologically sound, thereby ensuring optimal use of natural resources to support the mission on a sustained basis. Installation managers can use the best information, tools, and approaches to maximize both their output and their own expertise and experience.

Status

Technology is continually evolving to meet complex challenges. Currently the inventory and monitoring methods, along with the data collection and front-end software to manage the resulting database, have been implemented at 50 plus installations across the U.S. and in Germany. CERL Technical and ADP reports *U.S. Army Land Condition-Trend Analysis (LCTA) Plot Inventory Field Methods* Tazik et.al. N-92/03 February 1992 and *Land Condition Trend Analysis (LCTA) Data Collection Software Users Manual: Version 1.0* Anderson et.al. draft May 1995 and *Land Condition Trend Analysis (LCTA) Users Interface Program Users Manual: Version 1.0* Anderson et.al. draft May 1995 and *Land Condition Trend Analysis (LCTA) Program DATA Dictionary: Version 1.0* Sprouse and Anderson, EN-95/03 April 1995 are available for additional information. Data summary and analytical techniques have also been developed, are currently being tested and will be incorporated into the front-end software. CERL Technical reports *Land Condition Trend Analysis Data Summaries, Preliminary Data Applications* Price et.al., draft May 1995 and *Land Condition Trend Analysis Techniques, Power Analysis* Guertin et.al., draft June 1995 and *Land Condition Trend Analysis Techniques, Multivariate Analysis* Anderson et.al. draft August 1995 are available for additional information. A current research effort by the team is focused on

quantifying training impacts on the natural resources of military training lands and developing land carrying capacity models for those lands. The first component of the model to be developed is the plant succession module that incorporates LCTA and other data. The software of a prototype for this module will be ready for testing at Forts Bliss and Hood, Texas, Fort Riley, Kansas and Yakima Firing Center, Washington beginning in October 1995.

Point of Contact

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